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Message-Id: <199608062258.RAA19815@uro.theporch.com>
Errors-To: ws4s@midtenn.net
Reply-To: glowbugs@theporch.com
Originator: glowbugs@theporch.com
Sender: glowbugs@theporch.com
Precedence: bulk
From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
Subject: GLOWBUGS digest 255
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
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GLOWBUGS Digest 255

Topics covered in this issue include:

- 1) Transformer Ratings
by EricNess@aol.com
- 2) Re: Transformer Ratings
by okasb@rex.mtv.gtegsc.com (Bob Okas)

Date: Mon, 5 Aug 1996 23:23:04 -0400
From: EricNess@aol.com
To: glowbugs@theporch.com
Subject: Transformer Ratings
Message-ID: <960805232303_450242461@emout18.mail.aol.com>

I am about to get started on a power supply for my next project, A 6V6/807 transmitter, but I'm not sure about the ratings on the transformers I have collected. When a transformer says "550 Vct, 50 mA", does this mean I can expect 550V @ 50 mA when I use a bridge rectifier and leave the center tap open? By this same logic I can I assume I can expect 275V @ 100 mA when I ground the center tap and put rectifiers on the other two secondary lines? Needless to say that the transformer I used in my example doesn't have the oomph to drive an 807 amp but perhaps it could be used in a 6AQ7 push-pull modulator.

73's.

Eric, WD6DGX

Date: Mon, 5 Aug 1996 20:47:23 -0700
From: okasb@rex.mtv.gtegsc.com (Bob Okas)
To: EricNess@aol.com, glowbugs@theporch.com
Subject: Re: Transformer Ratings
Message-ID: <9608060347.AA14187@rex.mtv.gtegsc.com>

Eric,

The transformer rating you cited means that the unit is rated to produce 550 Vac(rms) at 50 mA. If you multiply the rms rating by $\sqrt{2} = 1.414$, you get about 777 volts peak-peak. If you ground the center tap and feed the legs into a half-wave bridge, you'll get about $777/2 = 388$ volts at the rectifier output, assuming you're using a capacitive input filter. The rated current is still 50 mA. If you float the center tap and use a full-wave bridge rectifier, you'll see 777 volts (minus any diode drop) across the output. But, the amount of current that's available is half, i.e. 25mA. The voltage-current product (watts) must be the same in both cases. We're talking about the conservation of energy here... In either case, that's about 19 watts, which should be adequate for a modulator supply, or perhaps a reduced-output 807 rig.

N.B. Observe the max plate voltage ratings of your tubes. I don't know the rating for a 6AQ5 offhand, but I remember that a 6V6 is good to about 285-300 volts tops on the plate.

Subject: Re: Transformer Ratings

End of GLOWBUGS Digest 255
